TABLE 3
Groundwater Profiling Boreholes and Monitoring Wells Specifications
OU1 New Cassel/Hicksville Ground Water Contamination Site
Nassau County, NY
March 2016

Transect No.	Location	No. of Wells at Location	Nearby Existing Wells	Approx. Number of Groundwater Profile Samples	Profile Interval (ft-bgs)	Approx. Total Depth of Borehole (ft-bgs)	Approximate Targeted Screen Zones	Rationale
T1	MW-19	1	None	0	NS	220	1I	Installation of this monitoring well may be necessary to obtain design parameters pending the results of PDI-20 and PDI-22. Data from this well would be used to design the northwestern portion of the western treatment area.
T1	PDI-20/MW-20	3	None	12	40,100-300	300	1S/1I/1D	Obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design for the northern portion of the western treatment area. Intermediate well - Obtain data to optimize treatment well placement both horizontally and vertically. Shallow well - Obtain data to confirm the top of the treatment zone. Deep well - Obtain data to confirm the bottom of the treatment zone.
T1	MW-21	1	TMW-9	0	NS	220	1I	Installation of this monitoring well may be necessary to obtain design parameters pending the results of PDI-20 and MW-24. Data from this well would be used to design the northeastern portion of the western treatment area.
T2	PDI-22/MW-22	3	TMW-2	9	40, 260-400	400	1S/1I/1D	Obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design along the western margin of the central portion of the western treatment area. Nearby TMW-2 had significant concentrations down to depth, PDI-22 will go deeper than TMW-2. Intermediate well - Obtain data to optimize treatment well placement both horizontally and vertically. Shallow well - Obtain data to confirm the top of the treatment zone. Deep well - Obtain data to confirm the bottom of the treatment zone.
T2	PDI-23/MW-23	3	EX-2	20	40, 100-440	440	1S/1I/1D	Obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design of the central portion of the western treatment area. Intermediate well - Obtain data to optimize treatment well placement both horizontally and vertically. Shallow well - Obtain data to confirm the top of the treatment zone. Deep well - Obtain data to confirm the bottom of the treatment zone.
T2	MW-24	1	TMW-3D	0	NS	370	1D	Installation of this monitoring well may be necessary to obtain design parameters pending the results of PDI-23. Obtain data to optimize the design along the eastern margin of the central portion of the western treatment area.
T2	MW-25	1	MW-12, TMW-1	0	310	310	1D	Installation of this monitoring well may be necessary to obtain design parameters pending the results of PDI-22. Obtain data to optimize the design along the western margin of the central portion of the western treatment area.
T3	MW-26	1	MW-13	0	NS	310	1D	Obtain data necessary to determine required radius of influence for extraction wells, design pumping rates, and to confirm capture of the 100-ppb ROD benchmark boundary required to optimize the design of the southern portion of western treatment area.
T3	PDI-27/MW-27	3	None	20	40, 100-460	460	1S/1I/1D	Obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design of the southern portion of the western treatment area. Intermediate well - Obtain data to optimize treatment well placement both horizontally and vertically. Shallow well - Obtain data to confirm the top of the treatment zone. Deep well - Obtain data to confirm the bottom of the treatment zone.
T3	PDI-28/MW-28	2	MW-7, MW-8	12	40, 200-400	May need to extend up to 500 feet deep based on TMW-3 results	1I/1D (may be additional deep wells)	Obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design along the eastern margin of the southern portion of the western treatment area. Based on the upgradient TMW-3 results, a deeper well is needed. Intermediate well - Obtain data to optimize treatment well placement both horizontally and vertically. Deep well - Obtain data to confirm the bottom of the treatment zone.
T4	MW-29	1	None	0	NS	220	1I	Obtain data necessary to demarcate the 100-ppb ROD benchmark boundary required to optimize the design the northern portion of the central treatment area.
T4	PDI-30/MW-30	3	MW-5, MW-6	15	40, 80-340	340	1S/1I/1D	Obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design. Intermediate well - Obtain data to optimize treatment well placement both horizontally and vertically. Shallow well - Obtain data to confirm the top of the treatment zone. Deep well - Obtain data to confirm the bottom of the treatment zone.
T4	MW-31	1	MW-5, MW-6	0	NS	220	1I	Installation of this monitoring well may be necessary to obtain design parameters pending the results of PDI-30. Obtain data along the eastern margin to optimize the design of the northern portion of the central treatment system.
T5	PDI-32/MW-32	3	MW-1 to MW-4, MW-10	16	40-340	340	1S/1I/1D	Obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design for the central portion of the central treatment area. Intermediate well - Obtain data to optimize treatment well placement both horizontally and vertically. Shallow well - Obtain data to confirm the top of the treatment zone. Deep well - Obtain data to confirm the bottom of the treatment zone.
T5	MW-33	2	TMW-5	0	NS	340	1S/1D	Installation of this monitoring well may be necessary to obtain design parameters pending the results of PDI-32. Obtain data along the eastern margin to optimize the design along the central portion of the central treatment system.
T6	MW-34	1	None	0	NS	260	1I	Installation of this monitoring well may be necessary to obtain design parameters pending the results of PDI-35. Obtain data along the western margin to design the southern portion of the central treatment system.
T6	PDI-35/MW-35	3	None	17	40, 100-400	400	1S/1I/1D	To obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design for the southern portion of the central treatment area. Intermediate well - Obtain data to optimize treatment well placement both horizontally and vertically. Shallow well - Obtain data to confirm the top of the treatment zone. Deep well - Obtain data to confirm the bottom of the treatment zone.
T6	MW-36	1	None	0	NS	260	1I	Installation of this monitoring well may be necessary to obtain design parameters pending the results of PDI-35. Obtain data along the eastern margin to optimze the design along the southern portion of the central treatment system.
T7	MW-37	1	None	0	NS	160	1S	Installation of this monitoring well may be necessary to obtain design parameters pending the results of PDI-38 and MW-40. Obtain data to along the western margin of the eastern treatment area in order to optimize the design along the northern portion of the eastern treatment system.
T7	PDI-38/MW-38	4	None	15	40-320	320	2S/1I/1D	Obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design for the northern portion of the eastern treatment area. Intermediate well - Obtain data to optimize treatment well placement both horizontally and vertically. Shallow wells - Obtain data to confirm the top of the treatment zone. Deep well - Obtain data to confirm the bottom of the treatment zone.
T7	MW-39	1	B-9	0	NS	160	1S	Installation of this monitoring well may be necessary to obtain design parameters pending the results of PDI-38 and MW-42. Obtain data to along the eastern margin of the eastern treatment area in order to optimize the design along the northern portion of the eastern treatment system.
T8	MW-40	1	EX-1	0	NS	230	1I	Obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design along the western margin for the central portion of the eastern treatment area.
T8	PDI-41/MW-41	2	EX-1	12	40, 120-320	320	2D	Obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design for the central portion of the eastern treatment area. Intermediate well - The existing EX-1 well can serve as the intermediate well. Deep wells - Obtain data to confirm the bottom of the treatment zone.
T8	MW-42	1	EX-1	0	NS	230	1I	Obtain data necessary to determine required radius of influence for extraction wells, design pumping rates, and to confirm capture of the 100-ppb ROD benchmark boundary required to optimize the design along the eastern margin of the central portion of the eastern treatment area. Note: TMW-7 has ~11,000 ppb of PCE.
T9	MW-43	1	MW-17	0	NS	320	1D	Obtain data necessary to determine required radius of influence for extraction wells, design pumping rates, and to confirm capture of the 100-ppb ROD benchmark boundary required to optimize the design along the western margin of the southern portion of the eastern treatment area.
T9	PDI-44/MW-44	1	MW-17	9	40, 220-360	360	1D	Obtain data necessary to design treatment well screens including depth intervals, overall length, and to demarcate the 100-ppb ROD benchmark boundary(s) required to optimize the design for the southern portion of the eastern treatment area. Intermediate well - The existing MW-17D well can serve as the intermediate well. Shallow well - The existing MW-17S well can serve as the shallow well. Deep well - Obtain data to confirm the bottom of the treatment zone.
T9	MW-45	1	MW-17	0	NS	320	1D	Obtain data necessary to determine required radius of influence for extraction wells, design pumping rates, and to confirm capture of the 100-ppb ROD benchmark boundary required to optimize the design along the eastern margin of the southern portion of the eastern treatment area.

Notes:
ft-bgs = feet below ground surface
* Water table estimated to be at a depth of 40 feet. Profiling should extend to the total depth indicated, unless screening results indicate deeper samples are necessary.
Targeted screen zones:
S = shallow well screened < 175 ft-bgs
I = intermediate well screened between 175 and 250 ft-bgs
D = deep well screened >250 ft-bgs
NS = not sampled
VPB = vertical profile borehole
Centerline vertical profile boreholes will be completed first to guide in setting screens in the monitoring wells and sampling depths in the profile boreholes.
The locations of Transects T1 through T9 intersecting lines of IWVS or groundwater extraction wells within the plumes are shown on Figure 3.
"Optional wells" are highlighted in red. Following the VOC concentration profiling results, a determination will be made as to whether installation of these wells is necessary to obtain design parameters.